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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/910,680
Filing Date: July 20, 2001
Appellant(s): SCHREMPP ET AL.

Kenneth D'Alessandro
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/24/2007 appealing from the Office action mailed 1/25/2007.

(1) Real Party in Interest

A statement identifying by name the real Party in Interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

- A). Lert Jr. et al. U.S. Patent # 4,230,990
- B). Aberson et al. U.S. Patent # 5,732,193
- C). Chowdhury et al. U.S. Patent # 6,026,439

D). Lai et al. U.S. Patent # 6,006,183

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-4,6-8,11-13,16-19,22-23,26,31-34,37-39,42-44,47-50,52-55,58,59,are rejected under 35 U.S.C. 102(b) as being anticipated by Lert Jr. et al. U.S. Patent # 4,230,990 (hereinafter Lert1).

Claims 20,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lert1 in view of Aberson et al. U.S. Patent # 5,732,193 (hereinafter Aberson).

Claims 24,25,27,28,51,56 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lert1 in view of Chowdhury et al. U.S. Patent # 6,026,439 (hereinafter Chowdhury).

Claims 9,10,14,15,40,41,45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lert et al. in view of Lai et al. U.S. Patent # 6,006,183 (hereinafter Lai).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4,6-8,11-13,16-19,22-23,26,31-34,37-39,42-44,47-50,52-55,58,59,are rejected under 35 U.S.C. 102(b) as being anticipated by Lert Jr. et al. U.S. Patent # 4,230,990 (hereinafter Lert1).

As per claim 1, Lert1 teaches a play list generation system comprising:

-at least one analysis module (Fig. 1 element 26) for receiving signals (broadcast signals) that includes of data wherein said data includes an arbitrary portion of data of an unknown work (cue signals of broadcast program)(column 10 lines 10-20), analyzing (extracting) said data, generating (deriving) a representation (broadcast signature) of said data including said arbitrary portion of data of said unknown work (unknown program identity)(column 10 lines 15-23), and transmitting said representation over a network to an identification server (central computer) (column 10 lines 26-32);

The reference teaches field monitor (analysis module)(Fig. 1 element 26) receiving the broadcast signal (receiving signals), which contains cue signals of broadcast program (arbitrary portion of data of an unknown work), then extracting process (analyzing) to derive (generating) broadcast signature (representation) of unknown program identity (data of said unknown work). The reference also teaches transmitting the broadcast program signatures (representation) by means of telecommunications link (over a network) to the central computer (ID server). It is inherent that broadcast signals which contains cue signals of broadcast program contains arbitrary part of signals because a whole signal contains an arbitrary portion of signal therefore it is inherent that signals contain an arbitrary portion. It is also inherent that broadcast signature (representation of data) includes an representation of arbitrary portion because since the representation is created from the whole signal (data), arbitrary portion is covered because a representation of the whole signal is made therefore a representation of arbitrary portion of data is inherently made.

-at least one identification (ID) server (Fig. 1 element 28)(central computer) for receiving said representation over said network (telecommunication link) from said at least one analysis module (field monitor) and determining the identity of said unknown work from said representation (column 10 lines 26-32, lines 38-44).

The reference teaches central computer (ID server) receiving the broadcast signals (representations) by means of telecommunications link (over said network) from the field monitor (analysis module) and using the broadcast signatures and comparing them with reference signatures to determine the identity of the broadcast program (unknown) from the broadcast signatures (from representations).

As per claim 2, Lert1 teaches the system of claim 1, wherein said at least one analysis module (Fig. 1 element 26) further includes an input port (Fig. 1 element 226) configured to receive said signals from a network source (Fig. 1 element 20) (column 10 lines 10-17).

The reference teaches field monitor (Fig. 1 element 26) (analysis module) has an input port because the broadcast signal (Fig. 1 element 24) is going into field monitor, which receives the signals (Fig. 1 element 24) from a broadcasting station (Fig. 1 element 20) (network source).

As per claim 3, Lert1 teaches the system of claim 1, wherein said at least one analysis module further includes an input port configured to receive said signals from broadcast source (Fig. 1 element 20) (column 10 lines 10-17).

The reference teaches field monitor (Fig. 1 element 26) (analysis module) has an input port because the broadcast signal (Fig. 1 element 24) is going into field monitor,

which receives the signals (Fig. 1 element 24) from a broadcasting station (Fig. 1 element 20) (broadcast source).

As per claim 4, Lert1 teaches the system of claim 1, wherein said at least one analysis module further includes an input port configured to receive said data in the form of a pre-broadcast digital form (column 10 lines 10-25)

The reference teaches the previously recorded program on the video will be broadcasted (pre-broadcast digital form) and is sent to the field monitor (analysis module) through the input port.

As per claim 6, Lert1 teaches the system of claim 1, wherein said network comprises the Internet (Fig. 2 element 68,27)(Fig. 1 element 26,27,28).

The reference teaches the field monitor comprising a modem with a telecommunications link to the central computer therefore it is inherent that the ID server and analysis module are coupled to internet because the generally a modem is used to connect to the Internet.

As per claim 7, Lert1 teaches the system of claim 1, wherein said representation comprises feature vectors (column 12 lines 65-68)(column 13 lines 1-12)

The reference teaches the representation of the program comprises 4 32-point feature vectors.

As per claim 8, Lert1 teaches the system of claim 1, wherein the representation comprises a spectral representation of said data (column 12 lines 41-51).

The reference teaches the audio portion of the program signal is used and the spectral representation of the audio signal of the program is made.

As per claim 11, Lert1 teaches the system of claim 1, wherein said representation comprises a bit calculated key (column 15 lines 25-51).

As per claim 12, Lert1 teaches the system of claim 1, wherein said ID server is configured to identify said unknown work using feature vectors (column 12 lines 65-68)(column 13 lines 1-12).

The reference teaches minicomputer inside the central computer identify the unknown work by forming a feature set and then using that to form 4 32-point feature vectors.

As per claim 13, Lert1 teaches the system of claim 1, wherein said representation includes a spectral representation of said ID server is configured to identify said unknown work using said spectral representation of said unknown work (column 15 lines 25-64).

The reference teaches audio signal having spectral representation and computer (ID server) receiving the audio signal for detection (identify) using spectral representation.

As per claim 16, Lert1 teaches the system of claim 1., wherein said ID server is configured to identify said unknown work using a bit calculated key (column 15 lines 25-51)

As per claim 17, Lert1 teaches the system of claim 1 , wherein said at least one analysis modules are further configured to receive a plurality of streaming sources (Fig.1 element 20) for analysis at a single location (Fig. 1 element 28)(column 10 lines 10-32)

The reference teaches broadcasting station (Fig. 1 element 20) and is received at central computer after it has passed through field monitor.

As per claim 18, Lert1 teaches the system of claim 1, at least one analysis module is further configured to receive a plurality of streaming sources for analysis a plurality of different access points of the network (Fig. 1 element 26 on the right hand side) (column 11 lines 18-36)(column 11 lines 61-65).

The reference teaches broadcasting station (Fig. 1 element 20) and is received at a second field monitor and then to the central computer. The second field monitor also creates program signatures then passes to the central computer.

As per claim 19, Lert1 teaches the system of claim 1, wherein said at least one analysis module is configured to provide said representations to said at least one ID server at a predetermined time interval (column 25 lines 3-17, lines 22-31)

As per claim 22, Lert1 teaches the system of claim 19, wherein said at least one analysis module is configured to provide said representation to said at least one ID server responsive to receiving said signals and generating said representation (column 10 lines 10-33)

The reference teaches sending the broadcast signatures to the central computer (ID server) from the field monitor (analysis module) after the field monitor receives signals from the broadcasting station and then creating signatures (representation) and sending it to the ID server.

As per claim 23, Lert1 teaches the system of claim 19, wherein said at least one analysis module is configured to provide said representations to said at least one ID

server based on an out-of-band event (column 10 lines 13-32).

The reference when the cue is detected in the signal (out-of band event) in the field monitor (analysis module) the representation is provided.

As per claim 26, Lert1 teaches the system of claim 1, wherein said at least one ID server is further configured to provide an identification of said unknown work back to said at least one analysis module that transmitted said representation (column 11 lines 18-50)

As per claim 31, Lert1 teaches a method for automatically generating a playlist comprising:

-receiving, by at least one analysis module, data including an arbitrary portion of data of an unknown work (column 10 lines 10-20),

The reference teaches field monitor (analysis module)(Fig. 1 element 26) receiving the broadcast signal (receiving signals), which contains cue signals of broadcast program (arbitrary portion data of an unknown work). It is inherent that broadcast signals which contains cue signals of broadcast program contains arbitrary part of signals because a whole signal contains an arbitrary portion of signal therefore it is inherent that signals contain an arbitrary portion.

-generating, by said at least one analysis module, a representation of said data including said arbitrary portion of data of said unknown work (column 10 lines 26-32) and;

The reference teaches field monitor (analysis module)(Fig. 1 element 26) receiving the broadcast signal (receiving signals), which contains cue signals of

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broadcast program (data of an unknown work), and extracting process (analyzing) to derive (generating) broadcast signature (representation) of unknown program identity (data of said unknown work). The reference also teaches transmitting the broadcast program signatures (representation) by means of telecommunications link (over a network) to the central computer (ID server). It is inherent that broadcast signature (representation of data) includes an representation of arbitrary portion because since the representation is created from the whole signal (data), arbitrary portion is covered because a representation of the whole signal is made therefore a representation of arbitrary portion of data is inherently made.

-sending, by said at least one analysis module, said representation to at least one identification server over a network (column 10 lines 38-44)(Fig. 2 element 27,68)

The reference also teaches transmitting the broadcast program signatures (representation) by means of telecommunications link (over a network) to the central computer (ID server).

As per claim 32, Lert1 teaches the method of claim 31, further comprising the act of identifying, by said identification server, said unknown work based upon said representation (column 10 Lines 26-38)(column 10 Lines 48-64)

The reference teaches central computer receiving the broad program signatures (representation) and identifying them by using the signature and comparing it with the reference signatures.

As per claim 33, Lert1 teaches the method of claim 32, further comprising the act of storing said identification in a playlist database (column 11 Lines 23-36)

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The reference teaches storing the identifications in the central computer memory (database).

As per claim 34, Lert1 teaches the method of claim 32, further comprising the act of sending, by said identification server, said identification to said at least one analysis module (column 11 Lines 18-50).*

As per claim 37, Lert1 teaches the method of claim 31, wherein said network is internet (column 10 lines 26-32)(Fig. 2 element 68, 27)

The reference teaches field monitor sending the program signatures to the central computer through the telecommunication link and using the modem, which is inherent since a modem is used and the program signatures are going through the telecommunication link that the network is Internet.

As per claim 38, Lert1 teaches the method of claim 31, wherein said act of generating said representation comprises generating feature vectors of said data(Column 12 lines 65-67)(Column 13 lines 1-12).

The reference teaches the generating representation of the program comprises generating 4 32-point feature vectors (feature vectors).

As per claim 39, Lert1 teaches the method of claim 31, wherein said act of generating said representation comprises a spectral representation of said data (column 12 lines.41-51).

The reference teaches the audio portion of the program signal is used and the spectral representation of the audio signal of the program is generated.

As per claim 42, Lert1 teaches the method of claim 31, wherein said

representation comprises a bit calculated key of unknown work (column 15 lines 25-51).

As per claim 43, Lert1 teaches the method of claim 32, wherein said act of identifying is performed using feature vectors in said representation. (Column 12 Lines 65-67)(Column 13 Lines 1-12).

The reference teaches the representation of the program comprises 4 32-point feature vectors (feature vectors).

As per claim 44, Lert1 teaches the method of claim 32, wherein said act of identifying is performed using a spectral representation of said data (column 12 Lines 41-51).

The reference teaches the audio portion of the program signal is used and the spectral representation of the audio signal of the program is made.

As per claim 47, Lert1 teaches the method of claim 31, wherein said act of identifying is performed using bit-calculated key of the data (column 15 Lines 25-51).

As per claim 48, Lert1 teaches the method of claim 1 wherein said act of receiving, by at least one analysis module, data includes receiving a plurality of streaming sources (Fig. 1 element 20) for analysis at a single location (Fig. 1 element 28) (column 10 lines 10-32)

The reference teaches broadcasting station (Fig. 1 element 20) and is received at central computer after it has passed through field monitor.

As per claim 49, Lert1 teaches the method of claim 31, wherein said act of

receiving, by at least one analysis module, said data includes receiving a plurality of streaming sources for analysis at different access points of the network (Fig. 1 element 26 on the right hand side) (column 11 lines 18-36)(column 11 lines 61-65).

The reference teaches broadcasting station (Fig. 1 element 20) and is received at a second field monitor and then to the central computer. The second field monitor also creates program signatures then passes to the central computer.

As per claim 50, Lert1 teaches the method of claim 31, wherein said act of sending, by said at least one analysis module, said representation to at least one identification server is performed responsive to generating said representation (column 10 lines 10-33)

The reference teaches sending the broadcast signatures to the central computer (ID server) from the field monitor (analysis module) after the field monitor receives signals from the broadcasting station and then creating signatures (representation) and sending it to the ID server.

As per claim 52, Lert1 teaches a playlist generation system comprising:

-means for receiving data including an arbitrary portion of data for an unknown work over a network (column 10 Lines 10-20) (Fig. 2 element 27,68,50)

The reference also teaches receiving the broadcast program signatures (representation) of the broadcast program and program identity (data include data or unknown work) by means of telecommunications link (over a network) at the central computer (ID server). It is inherent that broadcast signals which contains cue signals of

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broadcast program contains arbitrary part of signals because a whole signal contains an arbitrary portion of signal therefore it is inherent that signals contain an arbitrary portion.

-means for generating a representation of data including said arbitrary portion of data of said unknown work (column 10 lines 15-32), and

The reference teaches deriving (generating) broadcast signature (representation) of unknown program identity (data of said unknown work). It is also inherent that broadcast signature (representation of data) includes an representation of arbitrary portion because since the representation is created from the whole signal (data), arbitrary portion is covered because a representation of the whole signal is made therefore a representation of arbitrary portion of data is inherently made.

-means for sending said representation to at least one identification server over a network (column 10 Lines 38-44).

The reference also teaches sending the broadcast program signatures (representation) of the broadcast program and program identity (data include data or unknown work) by means of telecommunications link (over a network) to the central computer (ID server)

As per claim 53,54, it teaches same as claims 32,33 respectively therefore rejected under same basis.

As per claim 55, Lert1 teaches the system of claim 54, further including means for sending said identification from said at least one identification server to said at least one analysis module over said network (column 11 lines 18-50).

As per claim 58, Lert1 teaches the system of claim 52, further including means

providing an identification of said unknown work back to the at least one analysis module responsive to identification of said work from said representation (column 11 lines 18-50).

As per claim 59, Lert1 teaches a playlist generation system comprising:

- means for receiving data including an arbitrary portion of data of an unknown work (column 10 lines 10-20),

- means for generating a representation of said data including said arbitrary portion data of said unknown work (column 10 lines 26-32);

- means for sending said representation to at least one identification server over a network (column 10 lines 38-44)(Fig. 2 element 27,68) and

- means for sending an identification of said representation to at least one other computer system over said network (column 12 lines 2-20)(column 10 lines 38-44)

The reference teaches field monitor (analysis module)(Fig. 1 element 26) receiving the broadcast signal (receiving signals), which contains cue signals of broadcast program (data of an unknown work), then extracting process (analyzing) to derive (generating) broadcast signature (representation) of unknown program identity (data of said unknown work). The reference also teaches transmitting the broadcast program signatures (representation) by means of telecommunications link (over a network) to the central computer (ID server). It is inherent that broadcast signals which contains cue signals of broadcast program contains arbitrary part of signals because a whole signal contains an arbitrary portion of signal therefore it is inherent that signals contain an arbitrary portion. It is also inherent that broadcast signature (representation

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of data) includes an representation of arbitrary portion because since the representation is created from the whole signal (data), arbitrary portion is covered because a representation of the whole signal is made therefore a representation of arbitrary portion of data is inherently made.

2. Claims 20,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lert1 in view of Aberson et al. U.S. Patent # 5,732,193 (hereinafter Aberson)

As per claim 20, Lert1 teaches the system of claim 19, but does not explicitly teach predetermined time interval comprises at least once a day. Aberson teaches predetermined time interval, which comprises at least once a day (column 7 lines 36-55). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement Aberson's teaching in Lert's system with providing representations at a predetermined time interval, which is at least once a day. The motivation for doing so would be in order to provide representations at an exact time interval at which the representation or analysis will be provided.

As per claim 21, Lert1 the system of claim 19, but does not explicitly teach said predetermined time interval comprises approximately once an hour. Aberson teaches a predetermined time interval, which comprises approximately once an hour (column 7 lines 36-55). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Aberson's teaching in Lert1's system with providing representations at a predetermined time interval, which is approximately once an hour. The motivation for doing so would be in order to provide representations at an exact time interval at which the representation will be provided.

3. Claims 24,25,27,28,51,56 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lert1 in view of Chowdhury et al. U.S. Patent # 6,026,439 (hereinafter Chowdhury).

As per claim 24, Lert1 teaches the system of claim 1 , identified works including said identification of said unknown work determined from said representation (column 11 lines 31-36) but fails to teach wherein said ID server is further configured to generate a playlist. Chowdhury teaches ID server is further configured to generate a playlist of identified works (column 3 lines 54-66). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chowdhury's invention in Lert1's invention to come up with a server configured to generate a playlist, which has identification determined from representation. The motivation for doing so would have been because one can listen or watch the identified work in the playlist, which could be a song or a video continuously.

As per claim 25, Lert1 teaches the system of claim 1 , wherein said ID server configured to each said representation received from each at least one analysis module connected to the network responsive to identification of each said unknown work from each said representation (column 10 lines 10-33) but fails to teach, wherein said ID server is further configured to generate a playlist of identified works. Chowdhury teaches wherein said ID server is further configured to generate a playlist of identified works (column 3 lines 33-45)(column 3 lines 54-66). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement chowdhury's invention in Lert1's invention to come up with a server configured to generate a playlist

each representation received from the at least one analysis module connected to the network. The motivation for doing so would have been to generate a playlist a lot faster because there representation are received directly from the analysis module where the identified works will be coming from to create a playlist.

As per claim 27, Lert1 teaches the system of claim 18, to update identified works with an identification of said work of said representation responsive to identifying a representation (column 10 lines 10-33)(column 11 lines 31-36) but fails to teach update a playlist of identified works. Chowdhury teaches update a playlist of identified works (column 11 lines 18-27). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Chowdhury's invention in Lert's invention to come up with updating a playlist with identification responsive to identifying a representation. The motivation for doing so would have been to classify the identified work and put it into playlist so it would not go through the identification process again.

As per claim 28, Lert1 teaches the system of claim 27, wherein said at least one ID server is further configured to provide an identification of said unknown work back to said at least one analysis module that transmitted said representation responsive to identification of said unknown work from said representation (column 11 lines 18-50)

As per claim 51, Lert1 teaches a method for automatically generating a playlist comprising:

- receiving a representation of data including an arbitrary portion of data of an unknown work over a network (column 10 lines 10-20)(Fig. 2 element 27,68)

The reference also teaches receiving the broadcast program signatures (representation) of the broadcast program and program identity (data include data or unknown work) by means of telecommunications link (over a network) at the central computer (ID server). It is obvious that broadcast signals which contains cue signals of broadcast program contains arbitrary part of signals because a whole signal contains an arbitrary portion of signal therefore it is obvious that signals contain an arbitrary portion.

-identifying (determine identity) said unknown work (broadcast program) using said representation (broadcast signatures) (column 10 lines 26-32, lines 38-44).

The reference teaches using the broadcast signatures and comparing them with reference signatures to determine the identity of the broadcast program (unknown) from the broadcast signatures (from representations).

Lert1 fails to teach updating a playlist with an identification of said representation. Chowdhury teaches updating a playlist with an identification of said representation (column 11 lines 18-27). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement chowdhury's invention into Lert's invention to come up updating a playlist with identification. The motivation for doing so would have been to classify the identified work and put it into playlist so it would not go through the identification process again.

As per claim 56, it teaches same limitation as claim 25, therefore rejected under same basis.

As per claim 57, it teaches same limitations as claim 27, therefore rejected under same basis.

4. Claims 9,10,14,15,40,41,45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lert et al. in view of Lai et al. U.S. Patent # 6,006,183 (hereinafter Lai).

As per claim 9, Lert1 teaches the system of claim 1, but fails to teach the representation comprises the text output of a speech recognition system. Lai teaches representation comprises the text output of a speech recognition system (Column 4 lines 1-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Lai in the invention of Lert1 in order to come up with corresponding representation comprising text output. The motivation for doing so would have been to assign score to the words or text from the output. (Column 4 lines 1-11) .

As per claim 10, Lert1 teaches the system of claim 1, but fails to teach the representation comprises the musical score output of a music transcription system. Lai teaches representation comprises the musical score output of a music transcription system (Column 4 lines 1-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Lai in the invention of Lert in order to come up with corresponding representation comprising musical score output. The motivation for doing so would have been because score reflects the level of confidence of the translation of the corresponding representations. (Column 4 lines 1-25).

As per claim 14, Lert1 teaches the system of claim 1, but fails to teach ID server is configured to identify unknown work using the text output of a speech recognition

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system. Lai teaches ID server is configured to identify unknown work using the text output of a speech recognition system (Column 4 lines 1-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Lai in the invention of Lert in order to identify the unknown work using text output. The motivation for doing so would have been to assign score to the words or text from the output (column 4 lines 1-11).

As per claim 15, Lert1 teaches the system of claim 1, but fails to teach ID server is configured to identify unknown work using the musical score output of a music transcription system. Lai teaches ID server is configured to identify unknown work using the musical score output of a music transcription system (column 4 lines 1-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Lai in the invention of Lert1 in order to identify the unknown work using musical score output. The motivation for doing so would have been because score reflects the level of confidence of the translation of the corresponding representations of the unknown work (Column 4 lines 1-25).

As per claim 40, Lert1 teaches the method of claim 31, but fails to teach wherein said act of generating said representation comprises the text output of said unknown work from a speech recognition system. Lai teaches generating representation comprises the text output of unknown work from a speech recognition system (Column 4 lines 1-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Lai in the invention of Lert1 in order to come up with corresponding representation comprising text output of the unknown work. The

motivation for doing so would have been to assign score to the words or text from the output (column 4 lines 1-11).

As per claim 41, Lert1 teaches the system of claim 31, but fails to teach the representation comprises the musical score output of a music transcription system. Lai teaches representation comprises the musical score output of a music transcription system. (Column 4 lines 1-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Lai in the invention of Lert1 in order to come up with corresponding representation comprising musical score output. The motivation for doing so would have been because score reflects the level of confidence of the translation of the corresponding representations. (Column 4 lines 1-25),

As per claim 45, Lert1 teaches the method of claim 31, but fails to teach wherein said act of identifying is performed using the text output of said data from a speech recognition system. Lai teaches identifying is performed using the text output of data from a speech recognition system (Column 4 lines 1-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Lai in the invention of Lert1 in order to come up with identifying using text output of the unknown work from a speech recognition system. The motivation for doing so would have been to assign score to the words or text from the output (column 4 lines 1-11).

As per claim 46, Lert1 teaches the method of claim 32, but fails to teach wherein said act of identifying is performed using the musical score output of a music

transcription system. Lai teaches identifying is performed using the musical score output of a music transcription system (column 4 lines 1-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teaching of Lai in the invention of Lert in order to come up with identifying using musical score output of a music transcription system. The motivation for doing so would have been because score reflects the level of confidence of the translation of the corresponding representations (Column 4 lines 1-25).

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lert1 and Chowdhury et al. as applied to claims 27, and further in view of Brouwer et al. U.S. Patent # 6,279,124 (hereinafter Brouwer).

As claim 29, Lert and Chowdhury teaches the system of claim 27, wherein said at least one analysis module is further configured to but does not explicitly teach. purge said representation responsive to said identification received. Brouwer teaches purging a representation responsive to said identification is received (column 30 lines 40-50). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement Brouwer invention in the invention of Lert1 and Chowdhury's invention to purge the representation. The motivation for doing so would have been to recover drive space or because it has been saved into back up media.

6. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lert1 in view of Brouwer et al. U.S. Patent # 6,279,124 (hereinafter Brouwer).

As per claim 35, Lert1 teaches the method of claim 34, further comprising the act

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purging, by said at least one analysis module, at least one file corresponding stored to said identification. Brouwer teaches the act purging, by said at least one analysis module, at least one file corresponding stored to said identification (column 30 lines 40-50). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Brouwer invention in the invention of Lert and Chowdhury to purge at least one file corresponding to the identification. The motivation for doing so would have been to recover drive space or because it has been saved into back up media.

(10). Response to Arguments**Appellant's First Argument:**

Appellants' specific contention is that Lert1 does not teach receiving an arbitrary portion of data. Appellants maintain that Lert1 does not show the use of an arbitrary portion of data. Appellant cites definition 3b as "Existing or coming about seemingly at random or by chance..." for defining arbitrary and that Lert1 does not teach receiving an arbitrary portion of data because arbitrary portion of data is a random portion of data.

Examiner's Response:

Examiner respectfully traverses the appellant's argument because in column 10 lines 10-20, Lert1 teaches at least one analysis module (Fig. 1 element 26) for receiving signals (broadcast signals) that include data that is an arbitrary portion of data of an unknown work (cue signals of unknown program identity). Lert1 further discloses analyzing (extracting) said data and generating (deriving) a representation (broadcast

signature) of said data (broadcast signal) including said arbitrary portion of data (column 10 lines 15-23). Lert1 then discloses using (transmitting) said representation over a network to an identification server (central computer) (column 10 lines 26-32).

Appellant has cited a definition of the claim terminology "arbitrary" from Webster's Ninth New Collegiate Dictionary. The definition relied upon by Appellant, definition 3b, "Existing or coming about seemingly at random or by chance..." is not the broadest reasonable interpretation of the claim language "arbitrary". For example, definition 3a from Webster's Ninth New Collegiate Dictionary defines "arbitrary" as "Based on or determined by individual preference or convenience rather than by necessity". This definition of "arbitrary" is the broadest reasonable interpretation consistent with Appellant's specification and, thus, is the definition relied upon by the Examiner to interpret the claim language.

Using this definition of "arbitrary" it becomes clear that Lert1 meets all of the limitations of the claims. Lert1 discloses at least one analysis module (Fig. 1 element 26) for receiving signals (broadcast signals) that includes data wherein said data includes an arbitrary portion of data of an unknown work (cue signals of a broadcast program, column 10 lines 10-20). Lert1 teaches receiving broadcast signals by the field monitor, and the broadcast signals include cue signals, which means that cue signals are part of the broadcast signal (i.e. the broadcast signal contains the cue signals). So the arbitrary portion of the data is the arbitrary portion of the broadcast signal of the unknown broadcast program. The broadcast signal is determined by individual preference or convenience (i.e. using the whole broadcast signal or half of broadcast

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signal to derive broadcast signature). The broadcast signal is a whole signal that is used to derive the broadcast signature. A whole signal means it is not part of the signal, or $\frac{1}{4}$ or $\frac{1}{3}$ of the signal, it is in fact the whole or full signal. And, when the whole signal includes a portion that is arbitrary, then the entire signal becomes arbitrary thus meeting the claim language.

Appellant also argues that Lert1 requires a specific set of data following the cue signal, and that claim 1 on the other hand, "can use any portion of data from a work to detect the identity of the work from the use of signatures of overlapping segments of the known works".

Examiner respectfully disagrees with the appellant because claim 1 does not state "can use any portion of data from a work to detect the identity of the work from the use of signatures of overlapping segments of the known works". Even if the Examiner were to agree with the appellant, the Examiner would like to point out that "using any portion of data from a work to detect the identity", is met by Lert1 because Lert1 teaches using the broadcast signals which include the cue signals to derive the broadcast signature (generating representation of arbitrary portion of data). The broadcast signal is considered any portion of data from a work because "any portion of data" is a broad term, which means the whole broadcast signal can be considered as "any portion of data".

Appellant's Second Argument:

Appellant relies upon the same arguments for patentability of claim 31 as the arguments set forth with respect to claim 1.

Examiner's Response:

Accordingly, the Board's attention is respectfully directed to the responses set forth above.

Appellant's Third Argument:

Appellant states claim 20-21 are allowable since they are dependent on claim 1 which is allowable since, Lert1 does not teach using an arbitrary portion of data in claim 1. Thus, the combination of references does not include a teaching of each and every limitation.

Appellant also states "in order to maintain rejection the Examiner has the burden of providing evidence of prima facie obviousness, and the Examiner must provide evidence in prior art of a motivation to combine or modify a reference, a reasonable expectation of success and teaching of each and every claimed element".

Examiner's Response:

Examiner respectfully disagrees with the appellant because in column 10 lines 10-20, Lert1 teaches the field monitor receiving broadcast signals, and the broadcast signals include cue signals, which means cue signals are part of the broadcast signal. So the arbitrary portion of the data is the arbitrary portion of the broadcast signal of the unknown broadcast program. The broadcast signal is determined by individual preference or convenience i.e. using the whole broadcast signal or half of broadcast

signal to derive broadcast signature. Therefore broadcast signals, which include cue signals, can be considered arbitrary portion of data. Thus, as discussed at length above, Lert1 does teach the limitations of claim 1.

Accordingly the rejection of claims 20 and 21 is maintained for at least the same reasons provided above.

Further, the Examiner respectfully disagrees with the Appellant because the Examiner has provided motivation to combine the references.

In claim 20, Aberson teaches a predetermined time interval, which comprises at least once a day (column 7 lines 36-55). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement Aberson's teaching in Lert's system with providing representations at a predetermined time interval, which is at least once a day. Specifically, the motivation to combine would be to provide representations at an exact time interval.

As per claim 21, the Examiner has set forth proper motivation to combine the teachings of Lert1 with the teachings of Aberson. The teaching of Aberson includes a predetermined time interval, which comprises approximately once an hour (column 7 lines 36-55). Specifically, the motivation to combine the reference would be to provide representation at an exact time interval.

Further as explained by the Supreme Court in *KSR International Co. V. Teleflex Inc.*, 550 U.S.-, 82 USPQ2d 1385 (2007) there are other rationales that can be relied upon to show that an invention would have been obvious to one of ordinary skill in that art.

For example if all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results the invention would have been obvious to one of ordinary skill in the art at the time of invention.

In the instant case the predetermined time interval was known as shown by Lert1. The predetermined time interval, which comprises at least once a day or approximately one hour, was known as shown by Aberson. Combining the predetermined time interval of Lert1 with the predetermined time interval being at least once a day or approximately one hour as taught by Aberson would have yielded the predictable result of providing representations at an exact time interval at which the representation or analysis will be provided and thus would have been obvious to one of ordinary skill in the art at the time the invention was made.

Appellant's Fourth Argument:

Appellant states claims 24,25,27,28,51,56,57 are allowable since they are dependent on claim 1 which is allowable since, Lert1 does not teach using an arbitrary portion of data in claim 1. Thus, the combination of references does not include a teaching of each and every limitation.

Appellant also states "in order to maintain rejection the Examiner has the burden of providing evidence of prima facie obviousness, and the Examiner must provide

evidence in prior art of a motivation to combine or modify a reference, a reasonable expectation of success and teaching of each and every claimed element”.

Examiner's Response:

As discussed above, the rejection of claim 1 is proper. The Board's attention is respectfully directed to the Examiner's response to Appellant's first argument in response to Appellant's repeated contention that this is not so.

As per claims 24 and 51, the Examiner has set forth proper motivation to combine the teachings of Lert1 with the teachings of Chowdhury. The teachings of Chowdhury include the ID server being configured to generate a playlist of identified works (column 3 lines 54-66). Specifically, the motivation to combine the references would be to access the playlist of identified works.

As per claims 25 and 56, the Examiner has set forth proper motivation to combine the teachings of Lert 1 with the teachings of Chowdhury as discussed above with respect to claim 24. These teachings of Chowdhury further include the ID server being configured to generate a playlist of identified works. (column 3 lines 33-45, column 3 lines 54-66). Specifically, the motivation to combine the references would be to access the playlist of identified works.

As per claims 27 and 57, the Examiner has set forth proper motivation to combine the teachings of Lert1 with the teachings of Chowdhury as discussed above with respect to claim 24. These teachings of Chowdhury further include updating a playlist of identified works (column 11 lines 18-27). Specifically, the motivation to combine the reference would to access the playlist of identified works.

As per claims 28 and 58, the Examiner has set forth proper motivation to combine the teachings of Lert 1 with the teachings of Chowdhury as discussed above with respect to claim 24. Lert1 further discloses at least one ID server configured to provide an identification of said unknown work back to said at least one analysis module that transmitted said representation responsive to identification of said unknown work from said representation (column 11 lines 18-50).

In addition, In response to appellant's general arguments concerning the motivation to combine Lert1 with Chowdhury, Examiner points applicant to *KSR International Co. V. Teleflex Inc.*, 550 U.S.-, 82 USPQ2d 1385 (2007).

Combining Lert1 with Chowdhury is obvious in as much as all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of invention.

In the instant case having a playlist was known as shown by Lert1. Updating a playlist with an identification of said representation was shown by Chowdhury. Combining the playlist of Lert1 with updating a playlist with an identification of said representation of Chowdhury would have yielded the predictable result of to classify the identified work and put it into playlist so it would not go through the identification process again.

Appellant's Fifth Argument:

Appellant states claims 9,10,14,15,40,41,45,46 are allowable since they are dependent on claim 1 which is allowable since, Lert1 does not teach using an arbitrary portion of data in claim 1. Thus, the combination of references does not include a teaching of each and every limitation.

Appellant also states "in order to maintain rejection the Examiner has the burden of providing evidence of prima facie obviousness, and the Examiner must provide evidence in prior art of a motivation to combine or modify a reference, a reasonable expectation of success and teaching of each and every claimed element".

Examiner's Response:

As discussed above, the rejection of claim 1 is proper. The Board's attention is respectfully directed to the Examiner's response to Appellant's first argument in response to Appellant's repeated contention that this is not so.

As per claims 9 and 40, the Examiner has set forth proper motivation to combine the teaching of Lert1 with teachings of Lai. Lai teaches a representation comprising the text output of a speech recognition system (column 4 lines 1-11). Specifically, the motivation to combine the reference would be to assign the score to the words or text from the output to find out the accuracy or level of confidence of translation of the corresponding representation (column 4 lines 1-11)

As per claim 10 and 41, the Examiner has set forth proper motivation to combine the teaching of Lert1 with teachings of Lai as discussed above. The teachings of Lai further include a representation comprising musical score output of a music transcription system (column 4 lines 1-25). Specifically, the motivation to combine the reference

would be to know/find out the level of confidence, because the score reflects the level of confidence of the translation of the corresponding representations (column 4 lines 1-25).

As per claim 14 and 45, Examiner has set forth proper motivation to combine the teaching of Lert1 with teachings of Lai. The teachings of Lai further include an ID server is configured to identify unknown work using the text output of a speech recognition system (Column 4 lines 1-11). Specifically, the motivation to combine the reference would be to assign score to the words or text from the output, to find out the accuracy or level of confidence of translation of the corresponding representation (column 4 lines 1-11)

As per claim 15 and 46, Examiner has set forth proper motivation to combine the teaching of Lert1 with teachings of Lai. The teachings of Lai further include an ID server is configured to identify unknown work using the music transcription system (Column 4 lines 1-25). Specifically, the motivation to combine the reference would be to know/find out the level of confidence, because the score reflects the level of confidence of the translation of the corresponding representations (column 4 lines 1-25).

In response to applicant's arguments concerning the motivation to combine Lert1 with Lai, Examiner points applicant to KSR International Co. V. Teleflex Inc., 550 U.S.-, 82 USPQ2d 1385 (2007).

In the instant case generating and identifying of representation of the data was known as shown by Lert1. The generating of representation comprising the text output of a speech recognition system and identifying the representation using the text output of a speech recognition system was known as shown by Chowdhury. Combining the

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generating and identifying of representation of the data with using speech output of a speech recognition system of chowdhury would have yielded the predictable result of assigning a score to the words or text from the output because the score reflects the level of confidence of the translation of the corresponding representations.


In the instant case generating and identifying of representation of the data was known as shown by Lert1. The generating of representation comprising the musical score output of a music transcription system and identifying the representation the musical score output of a music transcription system was known as shown by Chowdhury. Combining the generating and identifying of representation of the data with the musical score output of a music transcription system of chowdhury would have yielded the predictable result of knowing/finding out the level of confidence, because the score reflects the level of confidence of the translation of the corresponding representations.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


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Examiner
Art Unit 2151
November 12, 2007


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